

REMARKS

The present invention is a charging system, a charging device for a charging system, a portable device and a charging method. In accordance with an embodiment of the invention, a charging system comprises a charging device which includes a primary side coil 201 and an induction core 107 which penetrates through the primary side coil, as illustrated in Fig. 2, and a portable equipment 109 and/or 111 which includes a secondary side coil 205 and an insertion portion 113 including an opening and containing a secondary side coil which allows the induction core to pass therethrough in a manner to penetrate into secondary side coil.

Claims 1-8 stand rejected under 35 U.S.C. § 103 as being anticipated by U.S. Patent 5,923,544 (Urano) in view of United States Patent 4,743,735 (Abura et al). These grounds of rejection are traversed for the following reasons.

Each of the claims substantively recites a charging device, including a primary side coil and a secondary side coil which is part of portable equipment with the induction core penetrating the primary side coil and the second side coil. This subject matter has no counterpart in the proposed combination of Urano and Abura et al.

In the Response to Arguments the Examiner states as follows:

On page 7 ,second paragraph of response, applicant argued that that Urano does not teach induction core which penetrates through a primary coil. Contradicting to what has been argued , applicant admits Urano teaches solid ferrite cores 37.

The examiner disagrees. Applicant claims recited core passing through a core are not specific to distinguish ferrite core or any other core has been used.

On the same page, third paragraph of response, applicant argued that Urano does not teach an insertion portion including an

opening containing a secondary side core, which allows the induction core to pass through.

The examiner disagrees. Urano teaches a recessed portion 32 is provided in a portion of the housing of the charger 25 so as to allow a lower portion of the portable telephone body 21 to be inserted in this recessed portion 32 (column 5, lines 44-52 and figure 2B).

The Examiner's Response to Arguments is submitted to be incorrect with respect to the current claims for the following reasons.

The Examiner states that the construction of Urano by the Applicant as teaching a solid ferrite core admits an induction core which penetrates through a primary coil. As stated above, the induction core is now recited as penetrating the primary side coil and the secondary side coil. Moreover, as may be seen from Fig. 1B of Urano, the telephone 21 is inserted into the holder such that the ferrite core 37 and the two windings NS1 and NS2 are placed between the opening of the first power transmitting coil portion 26 and the second power transmitting coil portion 27. See column 5, lines 43-52. No where is there any disclosure in Urano that the core 37 of the power receiving coil 28 passes through an opening to allow the induction core to penetrate into the secondary coil. As may be seen, the solid ferrite cores 37, which are outboard of core 27 around which the power receiving coil is wound, do not provide for an induction core to pass through an opening in a manner to penetrate into the secondary coil as recited in the claims.

It is noted that the Examiner considers the recessed portion 32 to allow a portion of the portable telephone to be inserted into the recessed portion. However, this relationship does not meet the recitation in the claims that the induction core penetrates through the primary side and a secondary side coil since, as the Examiner recognizes, what the Examiner has construed Urano to teach is not a

teaching of an induction core penetrating the primary and secondary side coils as recited in the claims.

The reliance upon Abura et al is misplaced. The Examiner has cited Abura et al as teaching "a charger for portable equipment and a single core penetrating a hole for suspending the portable equipment as a hook shape (column 4, lines 22-39 and column 6, lines 6-17)". Abura et al teach an electric hair curler in which rechargeable batteries 3, as shown in Fig. 13, supply electric power to a resistive heater 40. No where in the disclosure of Abura et al is there any utilization of an induction core or primary side coils and secondary side coils. It is submitted that the Examiner's rationale that "[t]herefore, it would have been obvious to one [of] ordinary skill in the art at the time the invention was made to be motivate[d] to utilize a charger utilizing coils as inductors in order to induce power and using [a] core that passes through a hole as [a] conducting means for the portable equipment, as evidenced by Abura et al..." is not applicable to the current claims.

It is submitted that a person of ordinary skill in the art would not consider the teachings of Abura et al to be analogous art to the claimed charging circuit of Urano. While Abura et al do teach the charging of rechargeable batteries through rectification, as indicated by full wave rectifier 90 in Fig. 13, there is no disclosure pertaining to the claimed induction core. Therefore, it is submitted that a person of ordinary skill in the art would not look to Abura et al for any reason since the subject matter of Urano pertains to the charging of a telephone by inductive charging and Abura et al pertains to the charging of rechargeable batteries by full wave rectification. Therefore, it is submitted that Abura et al would not motivate a person

of ordinary skill in the art to make any motivation of Urano since Abura et al's teachings do not have any relevance to inductive charging.

Dependent claims 7 and 8 recite a charging method for portable equipment in accordance with the charging system of claims 1 and 4. These claims are patentable for the same reasons set forth above with respect to claims 1 and 4.

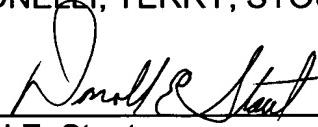
In view of the foregoing amendments and remarks, it is submitted that each of the claims in the application is in condition for allowance.

Accordingly, early allowance thereof is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR §1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to the Antonelli, Terry, Stout & Kraus, LLP Deposit Account No. 01-2135 (Docket No. 892.40310X00), and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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